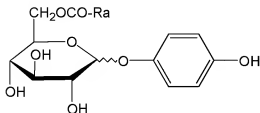


## AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** An arbutin ester compound represented by formula (1):

Formula (1)



wherein Ra is selected from the group consisting of:

$R_1\text{-CH=CH}_2$ , wherein  $R_1$  is a single bond, an unsubstituted alkyl group or an

arylene group;



$R_1\text{C=CH}_2$ , wherein  $R_1$  is a single bond, an alkyl group or an arylene group;

$R_1\text{-COOCH=CH}_2$ , wherein  $R_1$  is a single bond, an alkyl group or an arylene group;

$R_1\text{-COOH}$ , wherein  $R_1$  is a single bond, an alkyl group or an arylene group;

$R_1\text{-COO-R}_2$ , wherein  $R_1$  is a single bond, an alkyl group or an arylene group; and

$R_2$  is an alkyl group or an aryl group; and

$R_1\text{-C(CH}_3)_3$ , wherein  $R_1$  is a single bond, an alkyl group or an arylene group.

- 2.-10. **(Canceled)**

11. **(Withdrawn)**: A method of inhibiting tyrosinase comprising, providing as an active ingredient, at least one of the arbutin ester compounds according to claim 1, wherein tyrosinase is inhibited.

12. **(Canceled)**

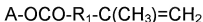
13. **(Currently amended)**: A process for producing an arbutin ester compound, comprising the step of carrying out an esterification reaction of arbutin with a carboxylic acid compound represented by one of formulae (11) to (15) or (17):

Formula (11)



wherein A is hydrogen or a substituted or unsubstituted alkyl or vinyl group; and  $R_1$  is a single bond, an unsubstituted alkyl group or an arylene group;

Formula (12)



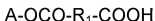
wherein A is hydrogen or a substituted or unsubstituted alkyl or vinyl group; and R<sub>1</sub> is a single bond, an alkyl group or an arylene group;

Formula (13)



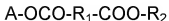
wherein A is hydrogen or a substituted or unsubstituted alkyl or vinyl group; and R<sub>1</sub> is a single bond, an alkyl group or an arylene group;

Formula (14)



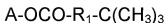
wherein A is hydrogen or a substituted or unsubstituted alkyl or vinyl group; and R<sub>1</sub> is a single bond, an alkyl group or an arylene group;

Formula (15)



wherein A is hydrogen or a substituted or unsubstituted alkyl or vinyl group; R<sub>1</sub> is a single bond, an alkyl group or an arylene group; and R<sub>2</sub> is an alkyl group or an aryl group;

Formula (17)



wherein A is hydrogen or a substituted or unsubstituted alkyl or vinyl group; and R<sub>1</sub> is a single bond, an alkyl group or an arylene group.

14. **(Original)**: The process according to claim 13, wherein the esterification is carried out in the presence of an enzyme catalyst.

15. **(Original)**: The process according to claim 13, wherein the esterification is carried out in the presence of a chemical catalyst.

16. **(Original)**: The process according to claim 13, wherein the esterification is carried out while performing a dehydration treatment.

17. **(Original)**: The process according to claim 13, wherein the esterification reaction step is followed by the steps of:

extracting and isolating unreacted carboxylic acid derivative(s) from the esterification reaction mixture with a nonpolar organic solvent; and subsequently,

adding excess water to extract and isolate unreacted arbutin and to precipitate the arbutin ester compound.

18-36. **(Canceled)**

37. **(Previously presented)** A composition comprising an arbutin ester compound according to Claim 1 and a suitable carrier.

38. **(Previously presented)** An external preparation for the skin comprising the composition according to claim 37.

39. **(Currently amended)** The arbutin ester compound of Claim 1, wherein -Ra is selected from the group consisting of:

-R<sub>1</sub>-CH=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond, an unsubstituted alkyl group or an arylene group;

-R<sub>1</sub>-C(CH<sub>3</sub>)=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond, an alkyl group or an arylene group;

-R<sub>1</sub>-COOCH=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond, an alkyl group or an arylene group; and

-R<sub>1</sub>-C(CH<sub>3</sub>)<sub>3</sub>, wherein R<sub>1</sub> is a single bond, an alkyl group or an arylene group.

40. **(Currently amended)** The arbutin ester compound of Claim 1, wherein -Ra is selected from the group consisting of:

-R<sub>1</sub>-CH=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond or an unsubstituted alkyl group having 1 to 16 carbon atoms;

-R<sub>1</sub>-C(CH<sub>3</sub>)=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond;

-R<sub>1</sub>-COOCH=CH<sub>2</sub>, wherein R<sub>1</sub> is an alkyl group having 1 to 16 carbon atoms; and

-R<sub>1</sub>-C(CH<sub>3</sub>)<sub>3</sub>, wherein R<sub>1</sub> is a single bond.

41. **(Currently amended)** ~~An~~ The arbutin ester compound of Claim 1, ~~wherein the compound is selected from the group consisting of~~ 6-*O*-acryloyl arbutin, 6-*O*-methacryloyl arbutin, 6-*O*-vinyladipoyl arbutin, arbutin 6-*O*-adipoyl acid ester, 6-*O*-methyladipoyl arbutin, 6-*O*-

decenoyl arbutin, 6-*O*-oleoyl arbutin, 6-*O*-pivaloyl arbutin, 6-*O*-benzoyl arbutin, 6-*O*-butanoyl arbutin, 6-*O*-lauroyl arbutin, 6-*O*-stearoyl arbutin, and 6-*O*-(10-undecylenoyl) arbutin.

42. (**Currently amended**) The arbutin ester compound of Claim 41 <sup>+</sup>, wherein the compound is 6-*O*-(10-undecylenoyl) arbutin.

43. (**Currently amended**) A composition comprising the arbutin ester compound of Claim 4142 and a suitable carrier.

44. (**Previously presented**) An external preparation for the skin comprising the composition of claim 43.

45. (**Withdrawn- Currently amended**) The method of Claim 11, wherein -Ra of the arbutin ester compounds is selected from the group consisting of:

-R<sub>1</sub>-CH=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond, an unsubstituted alkyl group or an arylene group;

-R<sub>1</sub>-C(CH<sub>3</sub>)=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond, an alkyl group or an arylene group;

-R<sub>1</sub>-COOCH=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond, an alkyl group or an arylene group; and

-R<sub>1</sub>-C(CH<sub>3</sub>)<sub>3</sub>, wherein R<sub>1</sub> is a single bond, an alkyl group or an arylene group.

46. (**Withdrawn- Currently amended**) The method of Claim 11, wherein -Ra of the arbutin ester compounds is selected from the group consisting of:

-R<sub>1</sub>-CH=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond or an unsubstituted alkyl group having 1 to 16 carbon atoms;

-R<sub>1</sub>-C(CH<sub>3</sub>)=CH<sub>2</sub>, wherein R<sub>1</sub> is a single bond;

-R<sub>1</sub>-COOCH=CH<sub>2</sub>, wherein R<sub>1</sub> is an alkyl group having 1 to 16 carbon atoms; and

-R<sub>1</sub>-C(CH<sub>3</sub>)<sub>3</sub>, wherein R<sub>1</sub> is a single bond.

47. (**Withdrawn**) A method of Claim 11, wherein the arbutin ester compounds are selected from the group consisting of 6-*O*-acryloyl arbutin, 6-*O*-methacryloyl arbutin, 6-*O*-vinyladipoyl arbutin, arbutin 6-*O*-adipoyl acid ester, 6-*O*-methyladipoyl arbutin, 6-*O*-decenoyl arbutin, 6-*O*-oleoyl arbutin, 6-*O*-pivaloyl arbutin, 6-*O*-benzoyl arbutin, 6-*O*-butanoyl arbutin, 6-*O*-lauroyl arbutin, 6-*O*-stearoyl arbutin, and 6-*O*-(10-undecylenoyl) arbutin.

48. (**Withdrawn**) The method of Claim 11, wherein said at least one of the arbutin ester compounds is 6-*O*-(10-undecylenoyl) arbutin.